

WHAT IS CLAIMED IS:

1. An amplifier linearizer comprising:
a signal cancellation circuit including a signal adjuster having M
branch signals ($M \geq 1$); and
5 a controller for adaptively controlling said M-branch signal adjuster,
said controller including only one monitor receiver to monitor the M branch signals.
2. An amplifier linearizer comprising:
a distortion cancellation circuit including a signal adjuster having N
branch signals ($N \geq 1$); and
10 a controller for adaptively controlling said N-branch signal adjuster,
said controller including only one monitor receiver to monitor the N branch signals.
3. An amplifier linearizer comprising:
a signal cancellation circuit including a signal adjuster having M
branch signals ($M \geq 1$);
15 a distortion cancellation circuit including a signal adjuster having N
branch signals ($N \geq 1$); and
a controller for adaptively controlling said M-branch signal adjuster
and said N-branch signal adjuster, said controller including only one monitor receiver
to monitor the M branch signals and only one monitor receiver to monitor the N
20 branch signals.
4. An amplifier linearizer comprising:
a signal cancellation circuit including a signal adjuster having M

branch signals ($M \geq 1$); and

a local oscillator for producing a plurality of pilot tones to guide adaptation of said signal adjuster.

- 5 5. A feedforward amplifier linearizer comprising:

 a signal cancellation circuit; and

 a distortion cancellation circuit,

 wherein the signal cancellation circuit and distortion cancellation
circuit are configured such that the linearizer achieves approximately 35 dB of
distortion cancellation over a 15 MHz bandwidth.
- 10 6. A feedforward amplifier linearizer according to Claim 5,

 wherein the linearizer instead achieves approximately 35 dB of distortion cancellation
over a 25 MHz bandwidth.
7. A feedforward amplifier linearizer according to Claim 5,

 wherein the linearizer instead achieves approximately 25 dB of distortion cancellation
15 over a 60 MHz bandwidth.
8. A feedforward amplifier linearizer according to Claim 5,

 wherein the linearizer instead achieves approximately 20 dB of distortion cancellation
over a 75 MHz bandwidth.